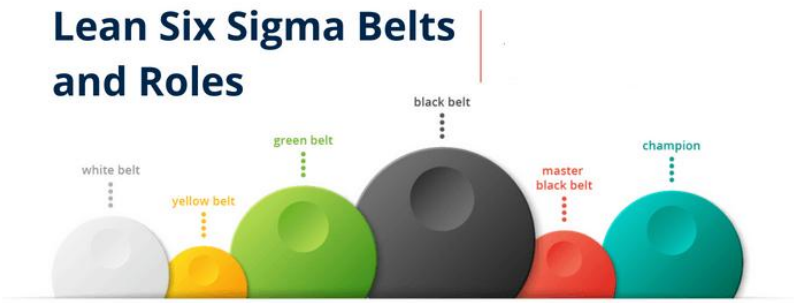
Lean Six Sigma Green Belt

SterlingNext Certification

Certification **Course Outline**



STERLING NEXT

Lesson 01 - Lifecycle Of a Lean Six Sigma Certification Workshop

- Course Introduction Lean Six Sigma Green Belt
- Course Introduction Lean Six Sigma Block Belt

Lesson 02 - Overview Of Lean Six Sigma

- Industry Snippets
- What is Lean Six Sigma?
- Why is it So Successful?
- Lean vs. Six Sigma
- When to use Lean or Six Sigma and When not to use?
- When do Individuals and Organizations Fail using Lean and Six Sigma?

Lesson 03 - Perspectives Of Lean Six Sigma

- Historical Perspective
- Mean vs. Variation
- Statistical Perspective
- Quantitative Perspective
- Customer Perspective
- Operational Perspective

Lesson 04 - Recognize Phase

- RDMAIC Phases
- Strategic Priorities
- Core Processes
- Business Processes at a Clinical Research Organization
- Business Processes for a HR Department
- SWOT Analysis
- A Sample SWOT Analysis Matrix
- Exercise - SWOT Analysis
- Customer Complaint Analysis
- VRIO Analysis
- VRIO vs. Strategic Competitive Edge
- Effort - Impact Analysis
- Business Perceptions and Feedback

Lesson 4.5 - Case STUDC- I

- Increasing Effectiveness by Understanding & Managing Perceptions

Lesson 4.5 - Case STUDC- II

- Roadmap for Increasing HR Department's Contribution to the Strategic Priorities

Lesson 05 - Define Phase

- Understanding Define Phase
- Creating the project Charter
- Defining the problem statement
- Define Process Boundaries
- Process Model Worksheet
- C-O-P-I-S
- Voice of the Customer VOCA
- What is a CTQ?
- Define CTQ's
- Translation Worksheet
- Selecting Output Measures
- 9310 Analysis
- Value Stream Mapping
- Deliverables for Define phase

Lesson 06 - Primer On Statistics

- Statistics - Do I already use it
- Descriptive vs. Inferential statistics
- Sample vs. Population
- Probability of Error
- Sampling Strategy
- Summarizing data collected for a sample
- Measures of central tendency
- Measure o/ dispersion
- The Shape of a distribution
- Normal Distribution
- Calculating 'Z' Value
- Probability Calculations
- Correlation Analysis
- Regression Analysis

Lesson 07 - Measure Phase

- Understanding Measure Phase
- Objectives of Measure Phase
- Selecting Project Y
- Plan for Data Collection:
  - Establish data collection goals
  - Developing Operational Procedures and Definitions
  - Collect Data and Monitor Consistency
- Describe and display Variation
- The shape of a distribution
- Understanding variation
- Process Capability
- A Six Sigma capable process
- A bridged process sigma table
- Mean Shift
- Change in process capability because of long term variation
- Observe Processes
- Measure through Time Value Mop
- Use Pareto Charts to prioritize and/or analyze
- See trends through Run Charts
- Calculate Control limits
- Processes not in Statistical Control

Lesson 08 - Analyze Phase - Seven QC Tools

- Check sheets
- Scatter diagrams
- Cause and Effect diagrams (CE, Fish bone or Ishikawa diagrams)
- Histograms
- Pareto charts
- Run charts
- Process Behavior & Control Charts

Lesson 09 - Analyze Phase - Lean Tools

- History of Xeon
- Pillows of TOYOTA Production System
- Value odd vs. non-value odd
- Leon as a differentiator
- Leon and Business
- MUDA - Seven Ways
- Value Stream Mopping
- Kaizen
- Kaikaku
- Continuous Flow
- Pull Production
- Kanban
- Visual Management
- Heijunka - leveling
- Heijunka – Sequencing

- Heijunka - Stability or Standard Work
- Jidoka (Autonomation)
- 5S - Sort, Set in Order, Shine,
- Standardize, Sustain
- Poko - Yoke
- Quick Changeovers
- Single Minute Exchange of Die

Lesson 10 - Analyze Phases

- Understanding Analyze Phase
- Find the Xs thot drive variation
- Two methods for identifying causes
- Class Functional Flowchart
- Threads of similarity
- Opportunities for error
- Scatter plots
- Benchmarking
- Risk Analysis & Mitigation
- S.W.O.T. Analysis
- PEST Analysis

Lesson 11 - Improve Phase

- Understanding Improve Phase
- Identify Solutions
- Prioritize Solutions
- Pilot Solutions
- Refine Solutions
- Justify Solutions
- Decision Matrix

- Impact- Effort Matrix
- Cost Benefit Analysis

Lesson 12 - Control Phase

- Understanding Control Phase
- Plan and Implement Solution
- Create Implementation Plan
- Control Charts
- Audit Plan
- Project Documentation
- Close Project

Lesson 13 - Design Fo9 Six Sigma

- DMADV
- DMADOV
- Design for X
- Special Design Tools

Lesson 14 – Minitab

- Introduction
- Graphical Representations
- All Statistical Tests
- Capability Analysis
- Control Charts
- Quality Companion